## (19) World Intellectual Property Organization

International Bureau



## 

(43) International Publication Date 17 February 2005 (17.02.2005)

**PCT** 

## (10) International Publication Number WO 2005/014704 A1

(51) International Patent Classification<sup>7</sup>: C08J 9/12, 9/28

(21) International Application Number:

PCT/GB2004/003264

(22) International Filing Date: 29 July 2004 (29.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

0318182.3 4 August 2003 (04.08.2003)

(71) Applicant (for all designated States except US): THE UNIVERSITY OF LIVERPOOL [GB/GB]; Senate House, Abercromby House, Liverpool L69 3BX (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COOPER, Andrew [GB/GB]; 306 Beetham Plaza, The Strand, Liverpool, L2 OXJ (GB). BUTLER, Rachel [GB/GB]; 32 Fleetwood Walk, Murdishaw, Runcorn, WA7 6DZ (GB).

(74) Agent: W.P.THOMPSON & CO.; Coopers Building, Church Street, Liverpool, L1 3AB (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: POROUS MATERIAL AND METHOD OF PRODUCTION THEREOF

(57) Abstract: The present invention relates to a method for producing a porous material comprising the steps of; (a) providing a C/W emulsion comprising an aqueous phase, a matrix building material, a surfactant and liquid CO2 phase; (b) at least partially freezing the aqueous phase; (c) gasifying CO2 from the liquid CO2 phase to form an intermediate porous material; (d) venting the gasified CO<sub>2</sub> from the intermediate porous material; and (e) freeze drying the intermediate porous material at least substantially to remove the aqueous phase and form the porous material. The present invention also relates to a porous material obtainable by the method.

